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Management of Sexually Transmitted Diseases at District and PHC Levels



World Health Organization
Regional Office for South-East Asia
New Delhi

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1. INTRODUCTION

SEXUALLY transmitted diseases (STD) remain a public health problem of major significance in most parts of the world, and South-East Asia is no exception. In this Region, the incidence of acute STD is believed to be high in many countries, although the precise magnitude of the problem is still not clear. However, it is well known that failure to diagnose and treat STD at an early stage results in serious complications and sequelae, including infertility, fetal wastage, ectopic pregnancy, cancer and death. STD also account for massive expenditure, both in terms of the cost of providing care and in terms of the economic burden due to work-days lost as a result of the associated morbidity. The epidemic of the human immunodeficiency virus (HIV) which causes AIDS has now brought the control of STD into a sharper focus, particularly because it is now well established that sexually transmitted infections, especially those which cause ulcers, greatly increase the risk of HIV transmission.

In addition, antimicrobial resistance of several sexually transmitted pathogens is increasing, rendering some low-cost treatment regimens ineffective. New agents (e.g. third-generation cephalosporins and fluoroquinolones) capable of treating infections caused by resistant strains are available but are expensive. However, their initial high cost must be weighed against the cost of inadequate therapy which may lead to complications and relapses resulting in the emergence and further spread of antimicrobial resistance.

In the light of such a situation, the World Health Organization (WHO) is promoting the diagnosis of STD on the basis of a set of symptoms (also called syndromes), and the provision of the most effective therapy at patient's first contact with a health or medical facility. This approach is popularly known as the syndromic management of STD. This booklet describes the said approach and provides guidelines for STD management using a Flow-Chart. It not only includes the diagnosis and treatment of specific syndromes, but also patient education including condom promotion and provision, and counselling and partner management, which are all essential components of syndromic management.

2. STD BURDEN IN SOUTH-EAST ASIA

THE limited data available show that STD are a common cause of morbidity and mortality in the South-East Asia Region. Examples given below highlight the extent of the problem. In **Bangladesh**, the prevalence of syphilis among prostitutes living in Dhaka was reported at 56.4% in floating prostitutes and 39% in institutionalized prostitutes in 1991.

In **India**, according to a STD baseline study conducted in 1992 in a red light area in Calcutta, 59% of the sex workers were found to have STD. In Madras, the (VDRL) positivity ranged from 0.8% in industrial workers to 10% in female remand prisoners, and the rate among women attending antenatal clinics was 1.74%. In a population-based cross-sectional study of women in rural Maharashtra state, 92% of all women surveyed were found to have one or more gynaecological conditions. Infections of the genital tract (vaginitis, cervicitis, and pelvic inflammatory diseases) contributed to half of this morbidity.

In **Indonesia**, sero-surveys carried out during 1992–93 in 26 provinces in Indonesia showed high VDRL rates among transvestites (41.2%); prostitutes (7.3%), and prisoners (6.7%). Only in **Thailand** are the reported STD on the decline following a strong STD/AIDS control programme introduced in 1989. Experiences from many countries and areas show that STD morbidity can be reduced through efficient STD prevention and management programmes and through the implementation of the syndromic management approach.

3. WHY IS SYNDROMIC MANAGEMENT IMPORTANT?

A fundamental goal of the STD control programmes is early detection and treatment of the disease, preferably at the point of the patient's first contact with the health system. In developing countries, the laboratory diagnosis of most conditions can be difficult, and even in settings with access to reliable laboratory facilities, the delays inherent in the reporting of test results hinder the timely treatment of STD cases. Referral of cases, even in a well-structured health system, remains problematic. Moreover, delays in treatment result in loss of follow-up of a significant proportion of clients and in continued transmission of the infection. Furthermore, STD patients in almost all countries are seen more often in private facilities (private physicians, clinics, or pharmacies) and primary health care settings than in specialized STD clinics. Therefore, an effective and efficient public health programme needs a tool that is rapid, inexpensive, simple, accurate, and which can be implemented on a large scale by health providers with diverse levels of expertise and training.

The syndromic approach to STD case management provides health workers in low-resource settings with such a

practical tool to improve diagnosis and treatment. It uses common symptoms of STD (urethral discharge, genital ulcer, vaginal discharge, etc.) as a starting point and, using a Flow-Chart, a STD management decision is arrived at. In addition to treatment, counselling about STD prevention, partner notification, and condom provision are essential parts of syndromic management.

The major advantages of syndromic case management are:

- (1) It is simple, inexpensive, rapid, and can be implemented on a large scale;
- (2) It requires minimum training and can be used by a broad range of health workers, and
- (3) It allows for diagnosis and treatment in one visit.

Effective management of STD using syndromic diagnosis and treatment with the most effective drugs prevents the development of complications and sequelae, decreases the spread of these diseases in the community, and offers a unique opportunity for targeted education on HIV prevention. The appropriate management of STD patients at their first encounter with a health care provider is therefore an important public health measure.

The use of appropriate standardized protocols is strongly recommended in order to ensure adequate treatment at all levels of the health service. Such standardized treatment regimens also facilitate the training and supervision of health care providers, delay the development of antimicrobial resistance in sexually transmitted agents, such as *Neisseria gonorrhoeae* and *Haemophilus ducreyi*, and are an important factor in rational drug procurement. A study conducted recently in the Mwanza district of Tanzania established conclusively the potential role of syndromic management as

an important advance in STD control and in preventing sexual transmission of HIV. Strengthening the syndromic management of STD caused a decline in the prevalence and incidence of STD and a 42% reduction in HIV incidence over a two-year period. The study further validates the syndromic management of STD as a cost-effective tool to tackle the STD problem in resource-poor settings such as in South-East Asia.

4. ESSENTIAL COMPONENTS OF SYNDROMIC MANAGEMENT

THESE include diagnosis and treatment based on syndromes; education on risk reduction, and condom provision, and counselling, partner notification and follow up. The same are described below:

4.1 Syndromic Diagnosis and Treatment

The current methods of laboratory diagnosis of STD are often time consuming, unreliable and expensive, and require sophisticated equipment and training in their use. In addition, for certain tests patients are required to return one or two days later. This is not feasible in many settings, where patients must travel long distances to receive health care and, even if they return the probability of developing complications is increased and the period of infectivity is prolonged by this delay in therapy. Few health institutions in developing countries have the laboratory facilities required for accurate etiological diagnosis.

Under the simplified syndrome-based approach developed and promoted by WHO and currently being used in a large number of countries in the developing world,

diagnosis is based on the identification of consistent groups of symptoms and easily recognized signs (syndromes) and the provision of effective treatment that will deal with the majority of organisms responsible for producing each syndrome. A great majority of STD fall under the categories of genital ulcer, vaginal discharge and urethral discharge. When a patient comes with such a complaint, a case-management decision is made using the Flow-Chart.

4.2 Education on Risk Reduction and Condom Provision

In every instance, the contact of STD patients with the health facility should be utilized to promote safer sexual behaviour and to educate patients on how to minimize or eliminate the risk of acquiring or transmitting STD/AIDS to others. They should be taught how to correctly use condoms. Condoms must be made available in all health facilities treating patients with sexually transmitted diseases, either free of charge or at an affordable price.

4.3 Counselling, Partner Notification and Follow-up

Each patient should be properly counselled on a one-to-one basis about his/her risk behaviour, chances of acquiring STD/AIDS, and the process of safer sexual behaviour. The counselling services should be provided in a confidential manner. If counselling services cannot be undertaken during the routine outpatient sessions, schedule separate time (appointment) to provide this service. The patient should be encouraged to inform his/her partners of their possible infection and the need to refer them for evaluation and treatment. This should be done in a voluntary and non-coercive manner. For more details, please see Section 6.

5. MANAGEMENT OF SPECIFIC STD-ASSOCIATED SYNDROMES

THIS section discusses the management of the most common clinical syndromes caused by sexually transmitted agents. Flow-Charts (algorithms) for the management of each syndrome are provided.

For all these conditions (except vaginitis), the sexual partner(s) of patients should also be examined for STD and promptly treated for the same condition(s) as the index case, i.e. the patient who was initially diagnosed as having STD.

5.1 Urethral Discharge

Male patients complaining of urethral discharge and/or dysuria should be examined for evidence of discharge. If none is seen, the urethra should be gently massaged along the ventral aspect of the penis towards the meatus. The major pathogens causing urethral discharge are *N. gonorrhoea* and *C. trachomatis*. Unless the diagnosis of gonorrhoea can be definitively confirmed by laboratory tests, the treatment of the patient with urethral discharge should provide adequate therapy to cover both these pathogens. If the patient has received any medication before coming to the facility, treatment should be provided for both pathogens even if there is no laboratory evidence of gonorrhoea.

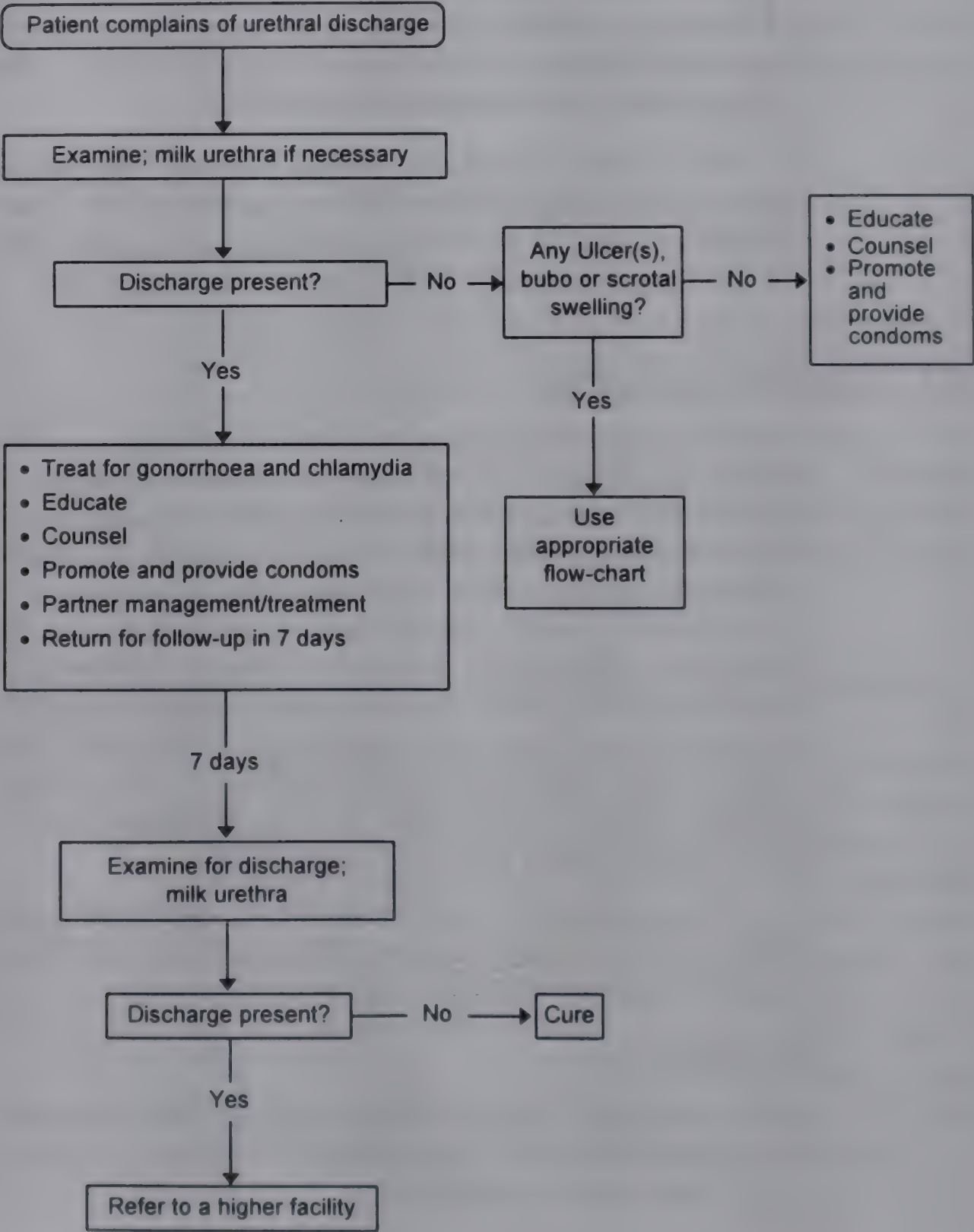
A man presents to your health facility complaining that he has noticed a discharge from the penis. Use the Flow-Chart 1 for urethral discharge.

Treatment:

- Treat your patient for gonococcal and chlamydial infections. All recommended treatment regimens have been included here.

Flow-Chart 1

URETHRAL DISCHARGE



However, the antibiotics that you use will be in accordance with your national guidelines.

- Give *CIPROFLOXACIN* 500 mg as a single oral dose (for the treatment of gonococcal urethritis). Make sure that the patient swallows the tablet(s) under supervision.

Alternatively, the patient may be treated with:

NORFLOXACIN 800 mg single oral dose, OR

CEFIXIME 400 mg single oral dose, OR

CEFTRIAXONE 250 mg single IM dose, OR

SPECTINOMYCIN 2 g single IM dose.

Plus

- Give *DOXYCYCLINE* 100 mg orally twice daily for 7 days to 14¹ days (for chlamydial urethritis). Make sure that the patient receives 14 tablets (capsules) with instructions to take one tablet in the morning and one in the evening, preferably before meals. Advise patients against taking antacids along with the drug and to avoid taking large quantities of alcohol and milk during treatment.

Alternatively, the following drugs may be used :

TETRACYCLINE 500 mg orally 4 times a day for 7 days, OR

ERYTHROMYCIN 500 mg orally 4 times a day for 7 days.

¹ In general, 7 days treatment should be sufficient. However, in some countries experience and data may indicate that treatment be given for 14 days.

- Ask the patient to return in a week's time for follow-up. If the follow-up visit will inconvenience him greatly, such as loss of a day's earnings or difficulties in finding transport to the health facility, instruct the patient to return only if his symptoms persist.
- Several studies have demonstrated that a 7-day treatment with Doxycycline is sufficient for treatment of chlamydia. If STD experts in the country are of the opinion that this regimen is inadequate, the period of treatment may be extended to 10 or 14 days according to the general consensus.

5.2 Genital Ulcer Disease

A patient at your clinic complains that he/she has noticed a sore on the genitals. The most common STD presenting with genital ulcer/s are syphilis, chancroid and genital herpes. Use the Flow-Chart 2 for genital ulcer disease.

Treatment:

- Treat for syphilis:
 - Give *BENZATHINE PENICILLIN* 2.4 million units intramuscularly. Either carry out a sensitivity test for penicillin or take a careful history, whichever is the practice in your country, in order to exclude possible hypersensitivity reactions by persons allergic to penicillin.

Alternatively, if the person is allergic to penicillin, use:

TETRACYCLINE 500 mg orally 4 times a day for 15 days, OR

DOXYCYCLINE 100 mg orally twice daily for 15 days, OR

ERYTHROMYCIN 500 mg orally 4 times a day for 15 days.

Plus

- Treat for chancroid:
 - Give *ERYTHROMYCIN* 500 mg orally 4 times daily for 7 days. Make sure that the patient receives a full supply of the drugs with clear instructions on how to take them.

Alternatively, the following may be used:

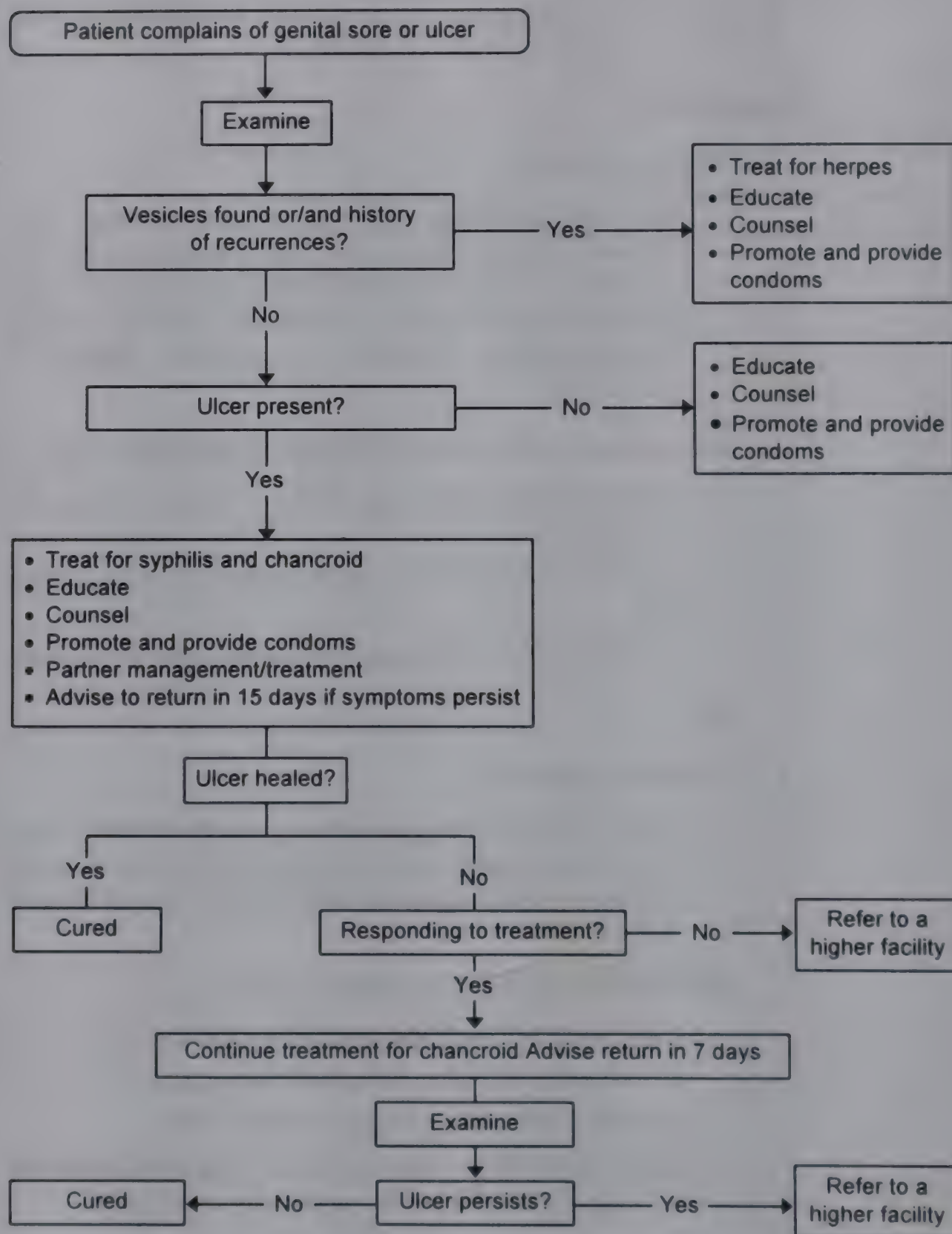
CIPROFLOXACIN 500 mg single oral dose, OR

CEFTRIAXONE 250 mg single IM dose, OR

SPECTINOMYCIN 2g single IM dose, OR

TRIMETHOPRIM 160 mg/*SULPHAME-THOXAZOLE* 800 mg (2 tablets) orally twice daily for 7 days.

Flow-Chart 2 GENITAL ULCERS



- **Treat for herpes:**

There is no known cure for herpes, but the course of symptoms can be modified if systemic therapy with acyclovir is started as soon as possible following the onset in the symptoms of a primary episode. A primary episode is one appearing for the first time, and characterized by severe clinical presentation with constitutional symptoms but one marked by few or no vesicles clustered together in the genital area.

First clinical episode:

A careful history-taking will establish this fact. All women and most men having a primary attack of symptomatic disease will benefit immensely from acyclovir therapy, if available, due to reduction in: the formation of new lesions; the duration of pain; the time required for healing, and viral shedding. Most of the first episodes of genital ulcers are not primary attacks and usually can be managed without acyclovir.

The recommended regimen for primary genital herpes:

ACYCLOVIR 200 mg orally 5 times daily for 7 days.

Recurrences:

Most recurrences can be managed by keeping the genital area clean by using saline washes.

Educate the patient and arrange for counselling, since often the patients are greatly distressed by the recurring lesions. Where patients experience severe pain, especially early in the disease, give analgesics and reassure them that it is part of the natural course of the disease.

5.3 Vaginal Discharge

Vaginal discharge is most commonly caused by vaginitis, but may also be the result of cervicitis. *N. gonorrhoeae* and *C. trachomatis* infections cause cervicitis, and *Trichomonas vaginalis*, *Candida albicans* and a synergistic combination of *Gardnerella vaginalis* and bacteria (bacterial vaginosis) cause vaginitis. Effective management of cervicitis is more important from a public health point of view, as cervicitis may have serious sequelae. However, clinical differentiation between the two conditions is difficult. The symptoms of vaginal discharge are neither sensitive nor specific for either condition. Recent studies suggest that an assessment of the woman's risk status may help in making a diagnosis of cervicitis, but further evaluation using the Flow-Charts presented below is needed, particularly with regard to risk factors, which vary from country to country. Where it is not possible to differentiate between cervicitis and vaginitis, and risk assessment is positive, patients should be treated for both the conditions.

A woman complains that she has a vaginal discharge. Use the appropriate Flow-Chart for Vaginal Discharge (3.1 and 3.2).

Treatment:

- If the risk assessment is negative (in Flow-Chart 3.1: vaginal discharge – no speculum examination), treat the patient for vaginitis alone (the box to the right). Treatment for vaginitis includes treatment for trichomoniasis, candidiasis and bacterial vaginosis as follows:

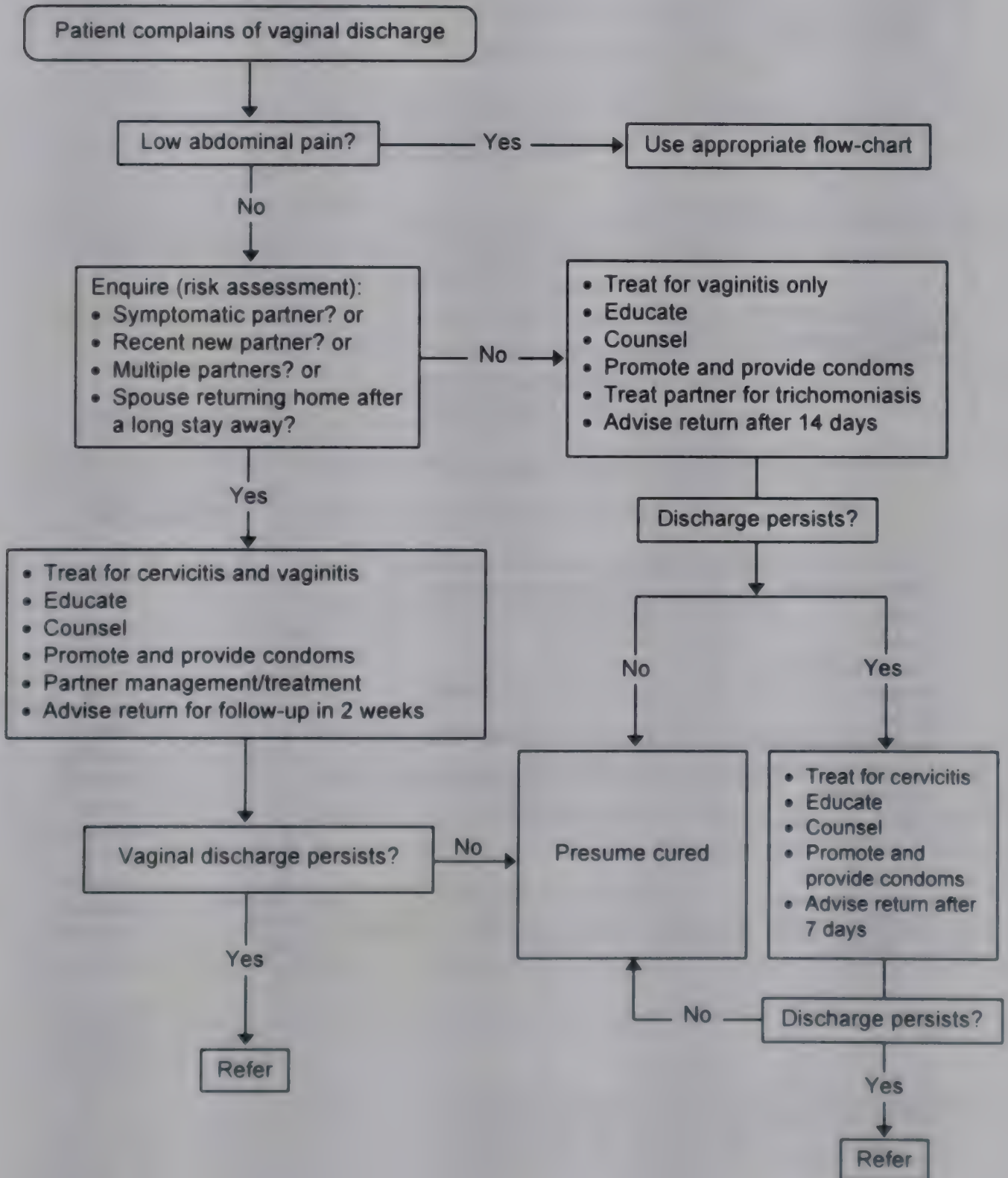
METRONIDAZOLE 2 g as a single oral dose to be taken at the clinic under supervision (for both trichomoniasis and bacterial vaginosis); or **METRONIDAZOLE** 400 mg given orally twice daily for 7 days is also effective.

Note: Do not use Metronidazole in the first trimester of pregnancy.

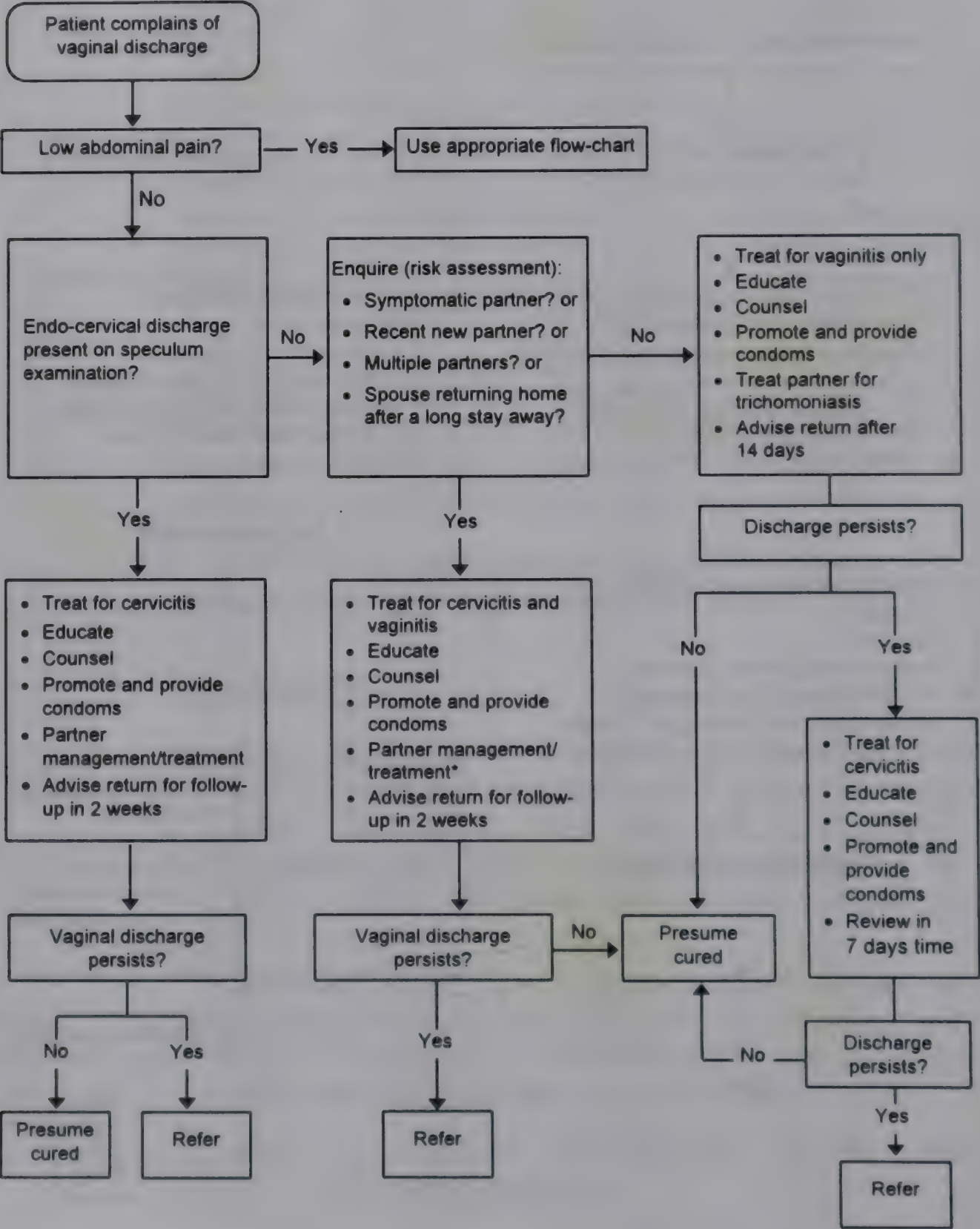
Flow-Chart 3.1

VAGINAL DISCHARGE

(No Speculum Examination)



Flow-Chart 3.2
VAGINAL DISCHARGE
(With Speculum Examination)



Plus

- *NYSTATIN 100 000 units* (one pessary), inserted intravaginally daily at night for 14 days (for vaginal candidiasis), OR

MICONAZOLE or CLOTRIMAZOLE 200 mg may be inserted into the vagina daily for 3 days, OR

CLOTRIMAZOLE 500 MG IS INSERTED INTO THE VAGINA ONCE ONLY.

- Advise the patient to take all the tablets and instruct her to return in 14 days. If the symptom persists, treat for cervicitis as follows:

- *CIPROFLOXACIN 500 mg* in a single oral dose for gonococcal infection, to be taken at the clinic and swallowed under supervision, OR

NORFLOXACIN 800 mg single oral dose, OR

CEFIXIME 400 mg single oral dose, OR

CEFTRIAZONE 250 mg single IM dose, OR

SPECTINOMYCIN 2 g single IM dose.

Plus

- *DOXYCYCLINE 100 mg* orally twice daily for 7–14 days for chlamydial infection. Give the patient a full supply for 7–14 days and instruct her to take one tablet in the morning and one in the evening, preferably before meals, OR

TETRACYCLINE 500 mg orally 4 times a day for 7 days, OR

ERYTHROMYCIN 500 mg orally 4 times a day for 7 days.

Note: *CIPROFLOXACIN, DOXYCYCLINE and TETRACYCLINE* should not be used in pregnancy.

- *If the risk assessment is positive, (Flow-Chart 3.1), treat the patient both for cervicitis (gonorrhoea and chlamydial infection) and vaginitis (trichomoniasis, candidiasis and bacterial vaginosis).*

Treat the patient for these two conditions, as described above.

5.4 Scrotal Swelling

A serious complication of gonococcal urethritis and chlamydial urethritis is infection of the testis. When infected, the testis becomes swollen, hot and excruciatingly painful. If quick and effective therapy is not given, the inflammatory process will resolve with healing occurring with fibrous scarring and destruction of the testicular tissue. This will render the patient subfertile. Other causes of acute epididymo-orchitis include the mumps virus and infection with the bacterium *Escherichia coli*. Infection with *E. coli* may occur as a complication of the urinary tract infection.

Patients who complain of having a swollen and/or painful scrotum may be managed by using the Flow-Chart 4.

Treatment:

Treat for gonorrhoea and chlamydia:

This box states that, if the patient has swelling and/or pain in the scrotum, without history of trauma, and testis is neither rotated nor retracted, treat him for gonorrhoea and chlamydia and give health education, condoms and information on partner treatment, and arrange for a follow-up visit. These steps are described more fully below:

- Treat the patient for gonococcal and chlamydial infections as follows:
 - CIPROFLOXACIN 500 mg as a single oral dose for gonococcal infection. Make sure that the patient swallows the tablets under supervision.

Other equally effective agents may also be used if ciprofloxacin is not available; these include:

NORFLOXACIN 800 mg single oral dose, OR

CEFIXIME 400 mg single oral dose, OR

CEFTRIAZONE 250 mg single IM dose, OR

SPECTINOMYCIN 2 mg single IM dose.

Plus

- *DOXYCYCLINE 100 mg orally twice daily for 10–14 days for chlamydial infection. Make sure that the patient receives 20–28 tablets (capsules) with instructions to take one tablet in the morning and one in the evening.*

Alternatively, the following drugs may be used:

TETRACYCLINE 500 mg orally 4 times a day for 10 days, OR

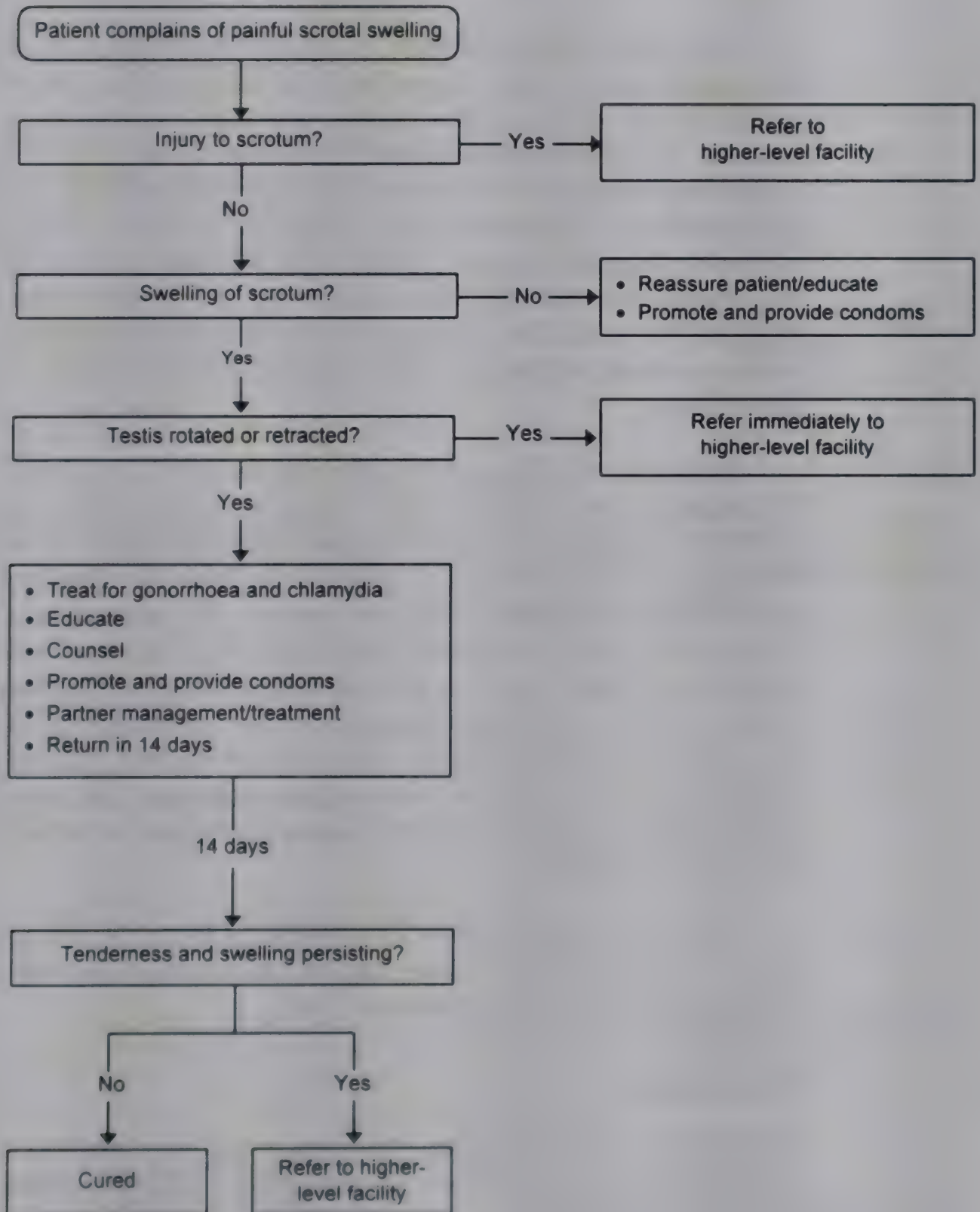
ERYTHROMYCIN 500 mg orally 4 times a day for 10 days.

- **SUPPORTIVE THERAPY**

This is a painful condition and supportive therapy with bed rest and scrotal elevation with a scrotal support and analgesics are essential parts of management.

- Advise the patient to take all his tablets and inform him about the mode of transmission of STD and the possible complications of infection, in particular of epididymo-orchitis.

Flow-Chart 4 SCROTAL SWELLING



5.5 Lower Abdominal Pain

Lower abdominal pain is often the presenting feature of women with pelvic inflammatory disease (PID).

Pelvic inflammatory disease is defined as an infection of the female genital tract above the internal os of the cervix and therefore means endometritis, salpingitis, tubo-ovarian abscess and pelvic peritonitis. PID occurs as a result of ascending infection from the cervix and is caused by *N. gonorrhoeae*, *C. trachomatis* and anaerobic bacteria, usually of the bacteroides species. Occasionally, PID may be caused by *Mycoplasma hominis*. The seriousness of PID lies in the fact that the condition can lead to pelvic peritonitis, tubo-ovarian abscess and to generalized peritonitis which can be a fatal illness.

Salpingitis may occur during the course of PID. An attack of salpingitis may lead to the fallopian tubes becoming blocked, resulting in subfertility or, if both tubes have become infected, total tubal infertility. It may also lead to partial tubal obstruction. When this occurs, the spermatozoa may travel across the partial obstruction, but the fertilized ovum is too large to do so and cannot get into the uterine cavity, resulting in a tubal pregnancy. The consequence of this is that the tubal ectopic pregnancy eventually ruptures and causes massive intra-abdominal haemorrhage and even death, unless diagnosed promptly and treated in a hospital with surgical facilities.

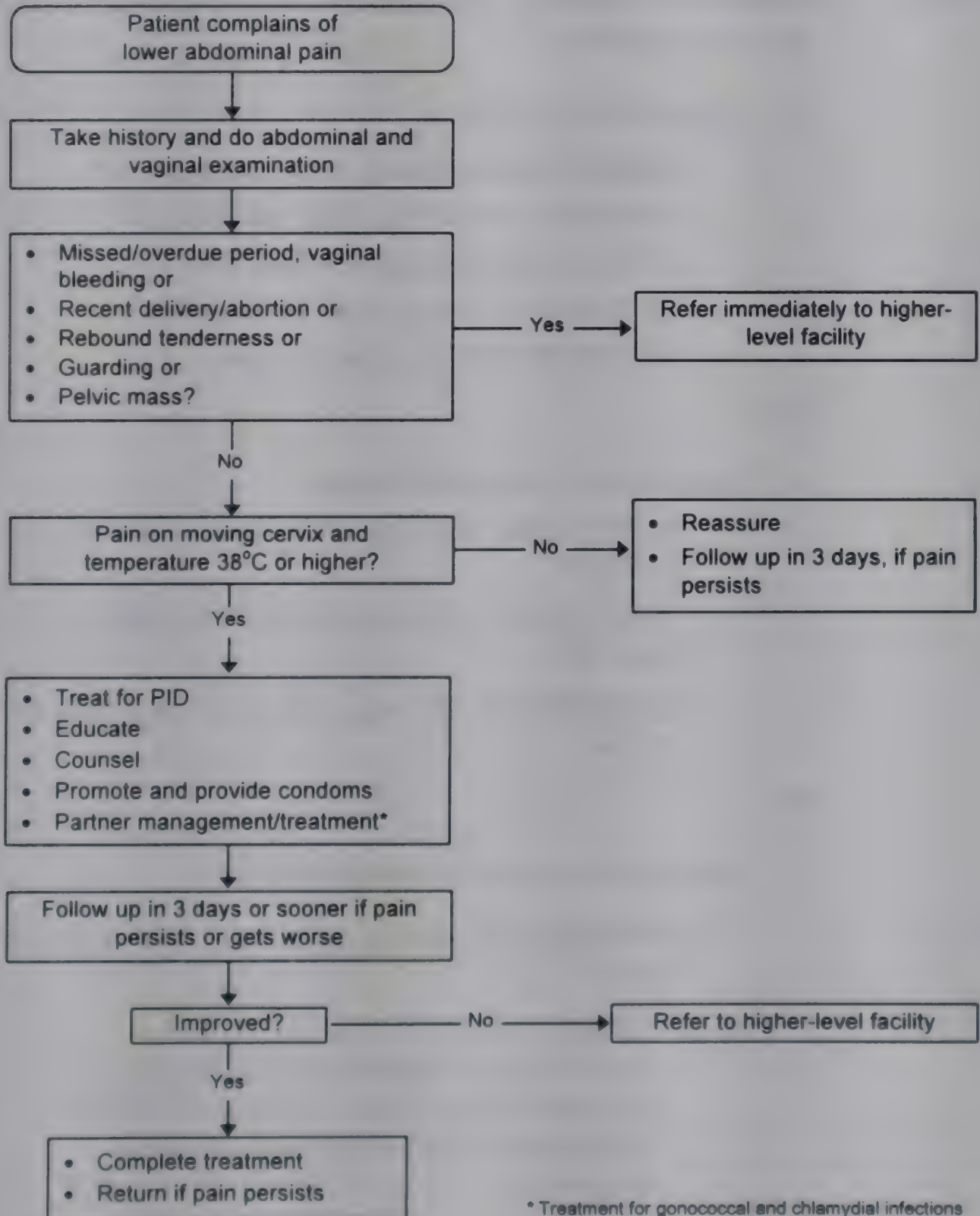
When a woman with PID presents with a history of lower abdominal pain and vaginal discharge, use the Flow-Chart 5 for lower abdominal pain.

Treatment:

Remember that, in treating PID, you must give treatment simultaneously for gonococcal, chlamydial and anaerobic bacterial infections.

Flow-Chart 5

LOWER ABDOMINAL PAIN IN THE FEMALE



Due to the severity of the condition and the serious consequences, more aggressive treatment than for uncomplicated gonococcal, chlamydial and anaerobic bacterial infections is required. You must also provide education, counselling and condoms, and give information on partner treatment.

- Treatment for gonorrhoea:

CIPROFLOXACIN 500 mg single oral dose, OR
NORFLOXACIN 800 mg single oral dose, OR
CEFIXIME 400 mg single oral dose, OR
CEFTRIAXONE 250 mg single IM dose, OR
SPECTINOMYCIN 2 g single IM dose.

Plus

- Treatment for chlamydial infection:

DOXYCYCLINE 100 mg orally twice daily for 14 days, OR
TETRACYCLINE 500 mg orally four times daily for 14 days, OR
ERYTHROMYCIN 500 mg orally four times daily for 10 days.

Plus

- Treatment for anaerobic bacterial infection:

METRONIDAZOLE 400 mg given orally twice daily for 14 days.

Note: *CIPROFLOXACIN*, *DOXYCYCLINE* and *TETRACYCLINE* should not be used during pregnancy and lactation. *METRONIDAZOLE* should not be used in the first trimester of pregnancy.

Pelvic inflammatory disease, if mismanaged, could result in serious complications and sequelae. Thus, it is very important to have a very clear concept of when management as an outpatient should be discontinued and the patient admitted to hospital for inpatient therapy.

5.6 Inguinal Bubo

This is a painful swelling of the lymph nodes in the inguinal region. It is known as acute suppurative inguinal lymphadenitis. A bubo can result from any kind of acute infection of the skin on the pubic area, genitals, buttocks, anus, thighs, legs, feet and toes. It may occur in STD such as chancroid and lymphogranuloma venereum (LGV). However, swollen and palpable lymph nodes may also occur in syphilis and HIV infection. The enlarged inguinal lymph nodes that are found in syphilis and HIV infection are not painful or tender to palpation and therefore cannot really be considered as buboes.

If a patient complains of having a painful inguinal swelling (bubo) or a bubo with a genital ulcer, use this Flow-Chart 6.

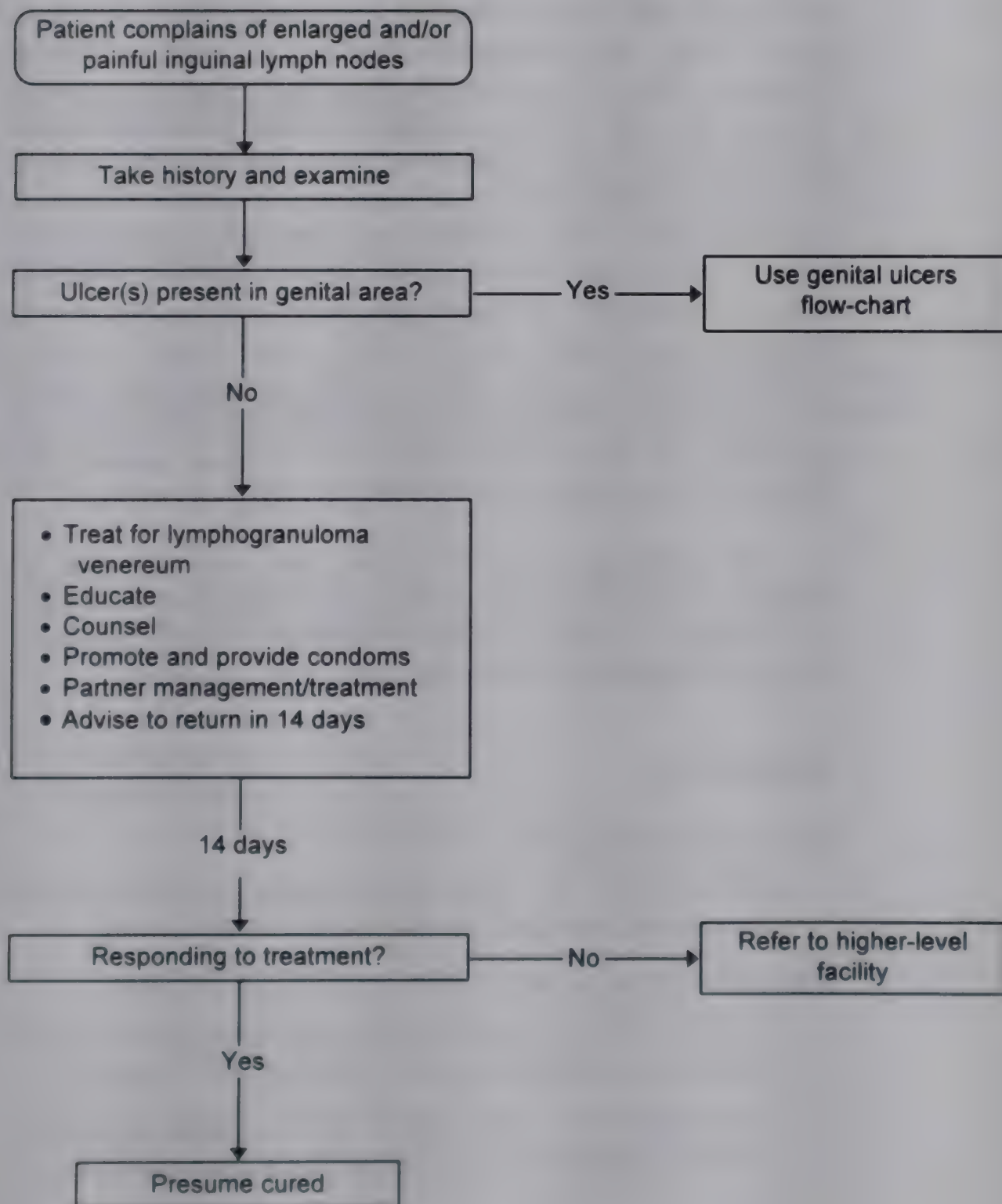
Treatment:

- If you find an inguinal bubo but no genital ulcer, treat the patient for lymphogranuloma venereum. The patient may give a history of having had a transient superficial ulcer which healed spontaneously. This is in keeping with the diagnosis of LGV.
- The treatment consists of: **Tetracycline** 500 mg qid for 14 days. Alternatively, Erythromycin 500 mg orally 4 times daily for 14 days may be given for those who cannot tolerate tetracycline.

Note: **Tetracycline** should not be used during pregnancy and lactation.

If a bubo becomes fluctuant, pus should be aspirated with a wide-bore needle and syringe every second or third day, until there is no aspirate. The entry into the bubo should be made through normal healthy skin. Under no circumstances should a bubo be incised.

Flow-Chart 6 INGUINAL BUBO



5.7 Ophthalmia Neonatorum (Neonatal Conjunctivitis)

Ophthalmia neonatorum is the term used to describe a condition where a baby develops purulent conjunctivitis in one or both eyes within four weeks of birth. It is a medical emergency and unless treatment is initiated within 24 hours, there could be permanent damage to eyes including blindness. This is a serious condition that requires systemic therapy as well as local irrigation with saline or other appropriate solutions. Irrigation is particularly important when the recommended therapeutic regimens are not available at the health care facility and the baby has to be referred to a higher-level hospital which may mean a delay in initiating specific treatment. If sterile saline is not available for irrigation, use boiled (and cooled) water that has been strained through a clean cloth. Health care provider should be careful to avoid the possibility of the purulent discharge squirting into his/her own eyes. Careful hand washing by personnel, before and after handling the baby, is essential.

The discharge from the baby's eyes may be due to infection with *Neisseria gonorrhoea* or *Chlamydia trachomatis* or a mixture of both. Use the Flow-Chart 7 which provides for the management of infection with both pathogens.

Treatment:

Recommended regimen:

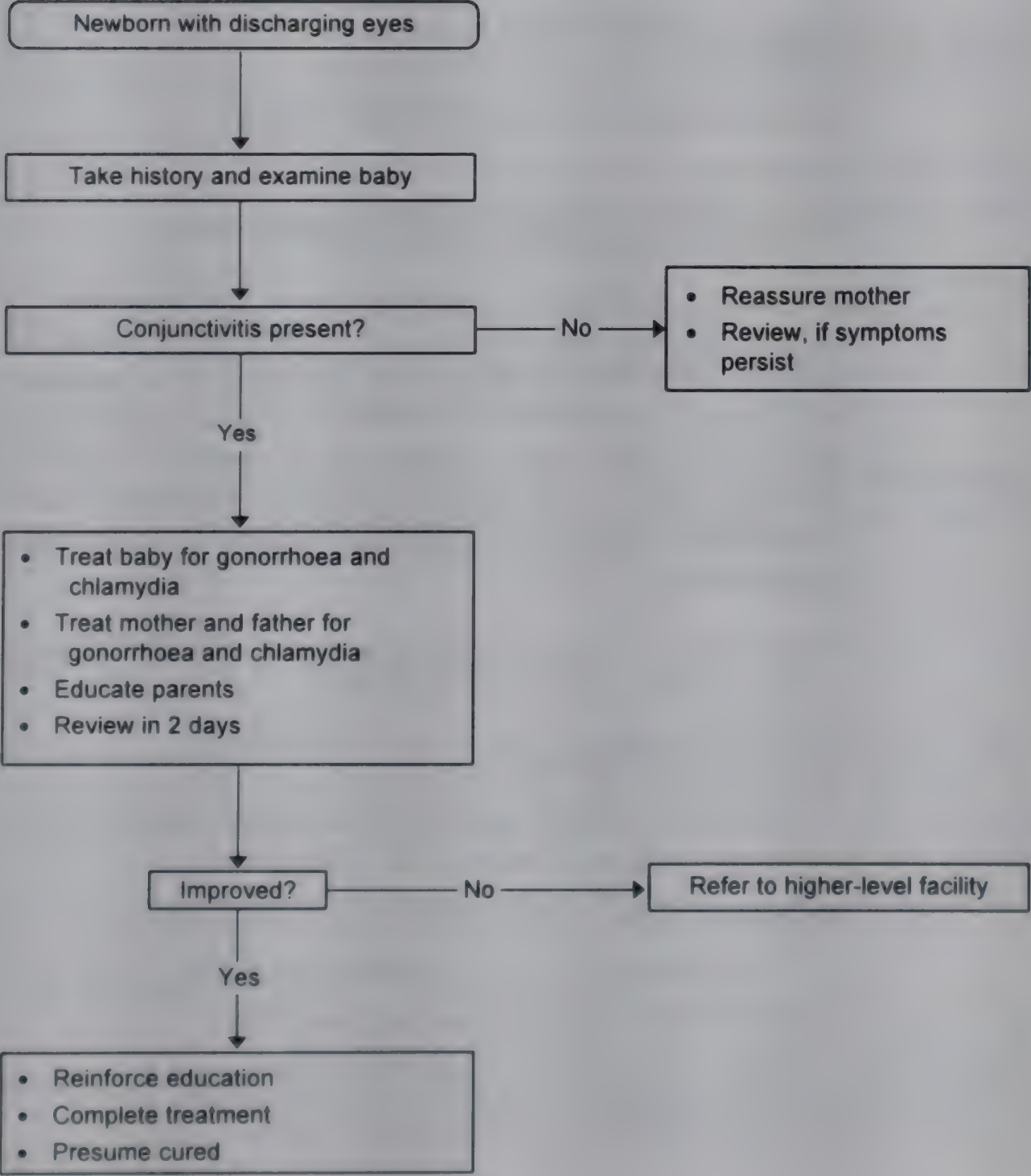
CEFTRIAXONE 50 mg/kg body weight by intramuscular injection as a single dose to a maximum of 125 mg.

Alternative regimens where ceftriaxone is not available:

KANAMYCIN 25 mg/kg body weight by intramuscular injection as a single dose to a maximum of 75 mg, OR

SPECTINOMYCIN 25 mg/kg body weight by intramuscular injection as a single dose to a maximum of 75 mg.

Flow-Chart 7
OPHTHALMIA NEONATORUM
(Neonatal Conjunctivitis)



Plus

ERYTHROMYCIN syrup 50 mg/kg body weight per day orally in 4 divided doses for 14 days.

Single-dose ceftriaxone, kanamycin and spectinomycin are of proven efficacy. The addition of tetracycline eye ointment to these regimens is of no documented benefit.

Follow-up:

Patients should be re-examined after 48 hours.

Prevention of Ophthalmia Neonatorum:

Gonococcal ophthalmia neonatorum can be prevented by using timely eye prophylaxis. The infant's eyes should be carefully cleaned immediately after birth and the application of 1% silver nitrate solution or 1% tetracycline ointment to the eyes of every infant at the time of delivery is strongly recommended as a prophylactic measure. However, ocular prophylaxis provides poor protection against *C. trachomatis* conjunctivitis.

Infants born to mothers with gonococcal infections should receive additional treatment as follows:

Recommended regimen:

CEFTRIAZONE 50 mg/kg by intramuscular injection as a single dose, to a maximum of 125 mg.

Alternative regimen where ceftriaxone is not available:

KANAMYCIN 25 mg/kg by intramuscular injection as a single dose, to a maximum of 75 mg, OR

SPECTINOMYCIN 25 mg/kg by intramuscular injection as a single dose, to a maximum of 75 mg.

6. PRACTICAL CONSIDERATIONS IN CASE MANAGEMENT

There are four major components in Sexually Transmitted Diseases control:

- (1) Education of individuals at risk on modes of disease transmission and means of reducing the risk of transmission;
- (2) Detection of infection in asymptomatic subjects and in subjects who are symptomatic but unlikely to seek diagnostic and therapeutic services;
- (3) Effective management of infected individuals, and
- (4) Treatment and education of sexual partners of the infected individuals.

The prevention of STD is based primarily on changing the sexual behaviours that put patients at risk, and on promoting the use of condoms.

6.1 Clinical Considerations

Routine STD care should be delivered through general health services. For individuals requesting health services for evaluation of STD, appropriate care consists of the following components. (The order in which interventions are carried out may vary, depending on the specific case and diagnosis):

(1) History-taking

The importance of a proper history cannot be overemphasized. Patients with problems relating to the genital area tend to be guarded and evasive in giving a history. With practice, the practitioner will be able to

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obtain a satisfactory history, in the short time available, in a busy outpatient clinic.

- Adopt a polite, friendly and non-judgmental attitude that would encourage the client to develop confidence and trust in you.
- Ask an open-ended question, such as "what brought you to the hospital?" to initiate a dialogue but thereafter ask brief, precise questions which call for a brief response, mostly of the "yes" or "no" type to save time.
- In order to make an accurate diagnosis it may be necessary to ask more questions during examination or even after, giving the patient greater privacy.
- Do not show annoyance if the patient's history has obvious discrepancies or keeps changing.
- Phrase your questions in such a way so as to minimize the opportunity for the patient to mislead you. For example, "when did you last have sex with someone?" is preferable to "did you have sex with someone?".

(2) Medical and behavioural risk assessment

Managing a patient/client with STD involves not only proper diagnosis and appropriate treatment but also education, partner management and counselling, if needed. The basis for these components of patient management is the medical and risk assessment. Medically the presenting condition may not depict the full spectrum of STD currently affecting the patient. Enquire about common symptoms like discharge from the urethra in a patient with genital ulcers, or recurring genital ulcers in a patient presenting with urethral discharge. If laboratory facilities permit, consider serological tests for syphilis. Enquire about previous

treatment as it may indicate whether the patient has already had suboptimal medication. It is also necessary to assess the risk of drug allergies and drug interactions. If the patient is to receive proper education and counselling, these must be preceded by behavioural risk assessment. The questions that need to be answered are, "is there an untreated partner who may re-infect the client?; is he likely to act irresponsibly because of an alcohol or drug problem?; and does he engage in unprotected penetrative sex with multiple partners for economic reasons, etc.?"

(3) Physical examination

This is an important step that will help you to arrive at a probable diagnosis and prevent you from making an incorrect diagnosis based on the patient's history alone.

- Approach the examination with professionalism and confidence, devoid of shyness and embarrassment.
- Provide privacy and confidentiality.
- Ensure that there is adequate exposure of the genital area for making a thorough examination. Even if pressed for time, do not rush the examination. If the patient shows any reluctance, take time to explain why an examination is necessary for correct diagnosis and treatment.
- Have a female chaperone when examining a female patient.
- Ensure that the universal precautions are observed in the clinic. All material used should be sterile or disposable. After use, all reusable gloves and other equipment should be sterilized and the soft waste, such as swabs, gauze and disposable gloves should be incinerated or burned.

(4) Laboratory investigation, if available and indicated

The syndromic management of STD is based on the presumption that laboratory facilities are not available. Do not delay or withhold treatment because the laboratory investigations are incomplete or the results of tests are not available. If available, clients engaging in high-risk activities should be offered the VDRL test and the test for HIV accompanied by pre-test and post-test counselling. Treatment failures should be re-evaluated for possible re-infection and then referred to a facility providing adequate laboratory support.

(5) Diagnosis

On the basis of the history you have taken and the physical examination you have carried out, use the appropriate Flow-Chart for making a syndromic diagnosis. Be particularly careful when confronted with low abdominal pain and scrotal swelling. Make doubly certain that you are not dealing with a surgical emergency.

(6) Curative or palliative therapy

Treat the patient using Flow-Charts and national treatment guidelines. While in most instances treatment will be curative, with viral STD only palliative therapy is possible. Genital herpes is a good example where the therapy is only palliative. This fact must be properly explained to the patient and counselling provided, if needed. Another condition where only palliation is possible is candidal vulvovaginitis which can be very refractory to treatment in some instances. Where a patient is treated for syphilis on the basis of positive serological tests, it is important to explain to the patient that the tests may continue to show seropositivity even though the patient has received adequate therapy.

(7) Counselling and education

- Regarding the present episode of STD:

Educate the patient on his/her present STD, and how it was acquired. In conditions like recurrent genital herpes and recurrent vulvovaginitis, counselling is greatly needed as the patients are usually very distressed.

- Regarding the prevention of STD and HIV:

Explain to the patient the association between STD and HIV and that it is the same risk behaviour that is responsible for acquisition of these two conditions. Educate the patient on methods of risk reduction through safer sex including abstinence.

- Regarding condom use:

Discuss the use of condoms for risk reduction. Issue free condoms if feasible. Demonstrate on a dildo or other suitable object the correct way of wearing a condom. De-sensitize the patient about condoms, especially if he is a regular risk-taker who should be a consistent condom user.

(8) Official reporting of the case

Some form of reporting of STD cases is required though this is often neglected. Reporting by name is discouraged. The lack of data about the incidence/prevalence of STD in most countries of the Region is due to poor reporting. All health care providers should participate in STD surveillance and sentinel surveillance programmes by providing the STD control programme with data when called upon to do so.

(9) Identification, notification and evaluation of sexual partner(s)

This is an important public health activity by which the partners of those identified as having STD are traced, informed of their probable exposure to infection, and offered medical and counselling services. The objective of this exercise is to break the chain of transmission. Partner notification should be considered whenever STD are diagnosed. In a categorized or specialized STD clinic it may be possible to carry out a complete partner management programme, but in facilities that have resource limitations it will be necessary to modify the process. It may be sensible to limit partner notification to certain priority diseases and syndromes, and to depend on the patient (index patient) to notify his/her partners (patient referral).

(10) Clinical follow-up, when appropriate

The ideal situation would be to do a clinical follow-up on every case of STD in order to establish a cure. In some situations this is not feasible, such as where a breadwinner has to forego a day's wages or where extensive travel has to be undertaken to attend a clinic or health facility.

Individuals who are seeking health care services for other reasons such as antenatal care, but who are at risk of acquiring STD, should undergo the following as part of their routine health care, if resources permit:

- STD risk assessment

STD risk assessment should be considered whenever sexually active persons such as antenatal care attenders and family planning clinic attenders complain of symptoms suggestive of STD, or when a patient in a surgical clinic complains of a burning sensation on passing urine.

- Directed physical examination based on elicited symptoms

A woman attending a gynaecology clinic for irregular menstrual bleeding may be found to have low-grade fever and tenderness in her fornices suggestive of a sub-acute PID. Such patients could be managed using the appropriate Flow-Chart.

- Screening for asymptomatic infections

This is often not cost-effective unless the exercise is limited to known risk groups. For example, sex workers may be screened with the VDRL/RPR test for syphilis and with gonococcal cultures if available for gonorrhoea.

6.2 Education for Primary Prevention

A consultation on the prevention of HIV and STD is a unique opportunity for educating people who, by definition, are at risk from these diseases.

Health facilities and medical practitioners who treat patients with STD should have resources available for promoting safer sexual behaviour. Behavioural assessment is an integral part of the STD history, and patients should be educated on methods to lower their risk of acquiring STD and HIV, including abstinence, careful selection of partners, and use of condoms and spermicides.

Condoms should be available in any health care facility providing clinical STD services. Instruction in their proper use should also be provided. Where feasible, condoms should be provided free of charge. Although condoms do not provide absolute protection from any infection, they greatly reduce the risk of infection if properly used.

6.3 Education or Counselling During STD Consultation

A consultation on STD provides an opportunity for the health worker to discuss on a one-to-one basis with the patient, his/her risk factors for HIV/STD. When such a discussion consists of providing of information about STD and their prevention; condom use, and partner notification, it is generally termed *education*. Education for prevention is an essential part of STD consultation.

Some issues which arise during a STD consultation may provoke emotional reactions in the patient. Health workers should be able to recognize these and ensure that time is set aside in a counselling session to discuss them.

Such issues include:

- Telling the partner or spouse about the STD diagnosis;
- Assessing their own risk for HIV, and deciding to test for HIV;
- Learning about, and coming to terms with, worrying complications of STD such as infertility, congenital syphilis, etc.;
- Concerns about passing on the sexually transmitted diseases to the progeny;
- Dealing with an incurable STD such as herpes genitalis which may be transmitted to the partner or spouse; and
- Symptoms suggesting HIV-related disease.

For any of the above issues, a decision needs to be made whether education alone, i.e. the provision of information as outlined above, is enough or whether counselling is needed.

In the context of HIV/AIDS/STD, WHO defines counselling as a confidential dialogue between a client and a

care provider aimed at enabling the client to cope with stress and take personal decisions. The counselling process includes an evaluation of personal risk of HIV/STD transmission and facilitation of preventive behaviour.

Before offering counselling to STD patients, the care provider needs to:

- Identify the needs of the client which may relate to stress or anxiety about a particular aspect of the STD, or it may be a special need for confidential risk assessment and planning for risk reduction, and
- Have counselling skills, privacy, and time (usually 15–20 minutes), including the availability for follow-up discussions, as appropriate.

These resources are usually not available at a busy STD or general outpatient clinic. It is therefore suggested that when a counselling need is identified, the patient should be referred to a nearby counselling service, if this is available. If it is not, then a health or social worker may be designated to provide the counselling. This person should receive the relevant training and be accorded the necessary space and time-off from other duties to provide the counselling.

In many developing countries where health resources are scarce, none of the above services may be formally available. However, it is recognized that the essential ingredients of counselling – compassion, sensitivity, listening skills and the necessary basic knowledge to provide useful, practical advice – are qualities that many health workers already possess. Indeed, they have been practising "counselling" with their patients throughout their professional lives. In the absence of formal training and a professional qualification, the importance of this aspect of their work should be re-emphasized and health workers should be given every encouragement to continue providing this valuable service.

6.4 Notification and Management of Sexual Partners

The sexual partners of STD patients are likely to be infected themselves and should be offered treatment. Further transmission of STD and re-infection are prevented by referral of sexual partners for diagnosis and treatment. Partner notification should be considered whenever STD is diagnosed, irrespective of where care is provided.

Notification can be by patient referral, the approach whereby an infected patient is encouraged to notify partner(s) of their possible infection without the direct involvement of health care providers, or by provider referral, the approach whereby health care providers or other health care workers notify a patient's partner(s) after obtaining the consent of the index patient.

An index patient is likely to have two types of partners or contacts. The person who infected the index patient is referred to as the source contact or primary contact and is often a sex worker. A person/s infected by the index patient is referred to as the secondary contact and is usually the spouse or the girl friend. Generally, provider referral is more feasible where the source contact is a sex worker.

Partner notification should be conducted in such a way that all information remains confidential. The process should be voluntary and non-coercive. The aim is to ensure that the sexual partners of STD patients, including those without symptoms, are referred for evaluation.

The management of sexual partners is based on the knowledge of the index patient's diagnosis (syndromic or specific). The following three strategies can be adopted for the treatment of partners:

- Offer immediate epidemiological treatment (treatment based solely on the diagnosis of the index patient) without any laboratory investigation.
- Offer immediate epidemiological treatment, but obtain specimens for subsequent laboratory confirmation. This strategy has the advantage that STD yet undetected in the index patient may be revealed in the laboratory tests of the contact or partner.
- Delay the treatment until the results of definitive laboratory tests are available.

The strategy selected will depend on the risk of infection, the seriousness of the disease, the availability of effective diagnostic tests, the availability of effective treatment, the likelihood of spread if epidemiological treatment is not given, and the available infrastructure for follow-up of patients.

It is recommended that epidemiological treatment (with the same treatment regimen as used for the index patient) be given to all sexual partners.

